

Appl. No. : 10/815,884
Filed : March 31, 2004

AMENDMENTS TO THE CLAIMS

Please add Claims 10-20, as indicated below.

Please amend Claims 1-4 and 6-9 as indicated below.

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[deletion]]):

1. (Currently Amended) A color-changeable pixel comprising:
a first electrode;
a second electrode substantially parallel to the first electrode, wherein the second electrode is movable relative to the first electrode in response to a voltage difference applied to the first electrode and the second electrode~~a moveable electrode and is seated in parallel with the first electrode substantially~~; and
a plurality of supports, located between the first electrode and the second electrode, wherein a restorability of the second electrode to movement relative to the first electrode is dependent on~~adjusted by~~ a distribution density of the supports.
2. (Currently Amended) The color-changeable pixel of claim 1, wherein ~~when the~~ plurality of supports comprises~~[[are]]~~ a plurality of posts, and the distribution density of the supports is a quantity of the posts per unit area.
3. (Currently Amended) The color-changeable pixel of claim 2, wherein ~~a range of~~ the distribution density is in a range between 225 posts per square millimeter and 2500 posts per square millimeter.
4. (Currently Amended) The color-changeable pixel of claim 2, wherein ~~a preferred range of~~ the distribution density is in a range between 400 posts per square millimeter and 2500 posts per square millimeter.
5. (Original) The color-changeable pixel of claim 1, wherein the supports are grid supports.
6. (Currently Amended) The color-changeable pixel of claim 1, wherein a material of the supports [[is]]comprises a photosensitive material~~or a non-photosensitive material~~.
7. (Currently Amended) The color-changeable pixel of claim 6, wherein [[a]]the material of the supports [[is]]comprises a photoresist.

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8. (Currently Amended) The color-changeable pixel of claim ~~[[6]]10~~, wherein the ~~[[a]]~~ material of the supports ~~[[is]]~~comprises polyester or ~~polyimide~~polyamide.

9. (Currently Amended) The color-changeable pixel of claim ~~[[6]]10~~, wherein the ~~[[a]]~~ material of the supports ~~[[is]]~~comprises an acrylic resin or an epoxy resin.

10. (New) The color-changeable pixel of claim 1, wherein a material of the supports comprises a non-photosensitive material.

11. (New) A display device comprising a plurality of color-changeable pixels, the display device comprising:

a substrate;

a first color-changeable pixel comprising a first electrode over the substrate and a second electrode over the first electrode, the second electrode movable relative to the first electrode, and a first plurality of supports having a first set of mechanical characteristics;

a second color-changeable pixel comprising a third electrode over the substrate and a fourth electrode over the third electrode, the fourth electrode movable relative to the third electrode, and a second plurality of supports having a second set of mechanical characteristics,

wherein the second set of mechanical characteristics is different from the first set of mechanical characteristics such that the second electrode moves from a relaxed position spaced from the first electrode by a first distance to an actuated position spaced from the first electrode by a second distance when a nonzero voltage is applied to the first color-changeable pixel, the second distance different from the first distance, and such that the fourth electrode moves from a relaxed position spaced from the third electrode by the first distance to an actuated position spaced from the third electrode by a third distance when the nonzero voltage is applied to the second color-changeable pixel, the third distance different from the second distance and from the first distance.

12. (New) The display device of Claim 11, wherein the first set of mechanical characteristics comprises a first distribution density of the first plurality of supports.

13. (New) The display device of Claim 12, wherein the second set of mechanical characteristics comprises a second distribution density of the second plurality of supports, the second distribution density different from the first distribution density.

14. (New) The display device of Claim 13, wherein the first distribution density and the second distribution density are in a range between 225 per square millimeter and 2500 per square millimeter.

15. (New) The display device of Claim 13, wherein the first distribution density and the second distribution density are in a range between 400 per square millimeter and 2500 per square millimeter.

16. (New) The display device of Claim 11, wherein the first plurality of posts are between the first electrode and the second electrode and the second plurality of posts are between the third electrode and the fourth electrode.

17. (New) A method of fabricating a color-changeable pixel, the method comprising:
providing a substrate;

providing a first electrode over the substrate;

providing a second electrode over the first electrode, the second electrode substantially parallel to the first electrode, the second electrode movable relative to the first electrode in response to voltage differences applied to the first electrode and the second electrode; and

providing a plurality of supports between the first electrode and the second electrode, wherein the second electrode has a preselected mechanical response in response to the voltage differences, the preselected mechanical response corresponding to a set of mechanical characteristics of the plurality of supports.

18. (New) The method of Claim 17, wherein the second electrode comprises a flexible layer.

19. (New) The method of Claim 17, wherein the preselected mechanical response comprises a distance moved by the second electrode upon application of the voltage differences to the color-changeable pixel.

20. (New) The method of Claim 17, wherein the set of mechanical characteristics comprises a distribution density.